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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/920,542	08/01/2001	Izumi Matsumoto	33841	5949

116 7590 12/13/2005

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EXAMINER

CHAU, COREY P

ART UNIT PAPER NUMBER

2644

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/920,542

Applicant(s)

MATSUMOTO ET AL.

Examiner

Corey P. Chau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,7,9-11,14,16,18 and 19 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,2,5,7,9-11,14,16,18 and 19 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-2 and 7, 9-12, 16, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication No. 2003/0123351 to Sawabe et al. (hereafter as Sawabe).
3. Regarding Claim 1, a sound retrieval apparatus for decoding sound data encoded in advance into a plurality of sound signals to be provided to a plurality of speakers for outputting sound in a three-dimensional sound field (i.e. apparatus for

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reproducing) (page 1, paragraph 0002), said sound signals being respectively related to a plurality of channels (page 15, paragraphs 0210, 0217, and 0221); comprising:

decoding means for decoding said sound data into said sound signals respectively on said channels (93) (Figs. 14-16);

assigning means for assigning said channels to said speakers respectively (abstract; page 24, paragraphs 0341 and 0350);

output level adjusting means for adjusting the output levels of said sound signals respectively on said channels (Fig. 16; page 24, paragraphs 0353 and 0354);

information storing means for storing channel assignment information about a specific association between said channels and said speakers and output level information about a specific association between said channels and said output levels of said sound signals respectively on said channels (page 23, paragraph 0339; page 24, paragraph 0354); and

control means for controlling said assigning means to have said assigning means assigning said channels to said speakers respectively based on said channel assignment information stored in said information storing means (Figs. 14-16; page 24, paragraphs 0353-0354), and controlling said output level adjusting means to have said output level adjusting means adjust the output levels of said sound signals respectively on said channels based on said output level information stored in said information storing means before said decoding means starts decoding said sound data into said sound signals respectively on said channels (Figs. 14-16; page 21, paragraph 0310).

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4. Regarding Claim 2, Sawabe discloses control means is operative to judge whether there is sound data on said respective channels or not to cause said speakers in association with said channels having no sound data thereon to be inoperative (i.e. the system reads the encoded data which contains information about the channel and it is inherent that the bits in the audio coding mode tells the system which channels are in use, such as the audio coding mode in an AC-3 compression) (page 15, paragraph 0224).
5. Regarding Claim 7, Sawabe discloses selecting means for selecting said sound signals decoded by said decoding means (page 15, paragraph 0216; page 19, paragraph 0297; page 20, paragraph 0306), and summing means for summing said sound signals selected by said selecting means to output summed sound signals to respective said speakers (page 15, paragraph 0214).
6. Regarding Claim 9, Sawabe discloses display means (99) for displaying the output levels of said sound signals respectively on said channels (Figs 14 and 15).
7. Claim 10 is essentially similar to Claim 1 and is rejected for the reasons stated above apropos to Claim 1.
8. Claim 11 is essentially similar to Claim 2 and is rejected for the reasons stated above apropos to Claim 2.
9. Claim 16 is essentially similar to Claim 7 and is rejected for the reasons stated above apropos to Claim 7.
10. Claim 18 is essentially similar to Claim 9 and is rejected for the reasons stated above apropos to Claim 9.

11. Claim 19 is rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication No. 2003/0123346 to Ishii et al. (hereafter as Ishii)

12. Regarding Claim 19, Ishii disclose a sound data recording apparatus for recording sound data encoded in advance from a plurality of sound signals to be provided to a plurality of speakers outputting sound in a three-dimensional sound field, said sound signals being respectively related to a plurality of channels; comprising: inputting means for having inputted thereto identification data identifying channel information about a specific association between said channels and said speakers and output level information about a specific association between said channels and said output levels of said sound signals respectively on said channels(i.e. first recording area on which multiplexed audio information are recorded as sets of one or more information units, and a second recording area on which control information for controlling recording of the multiplexed audio information are recorded); and recording means for recording said identification data attached to said sound data in a manner that said identification data is read before said sound data is read (i.e. recording means for recording first information representing the number of sets of information composing the multiplexed audio information, and second information instructing to record the multiplexed audio information as a stream in the second recording area) (Fig. 1; page 5, paragraph 0092; Claim 3).

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13. Claims 1-2, 7, 9-11, 16, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6704421 to Kitamura.

14. Regarding Claim 1, Kitamura discloses a sound retrieval apparatus for decoding sound data encoded in advance into a plurality of sound signals to be provided to a plurality of speakers for outputting sound in a three-dimensional sound field (Fig. 1; abstract), said sound signals being respectively related to a plurality of channels; comprising:

decoding means for decoding said sound data into said sound signals respectively on said channels (20);

assigning means for assigning said channels to said speakers respectively (Fig. 1; column 3, lines 40-64; column 4, lines 13-21; column 9, lines 5-44);

output level adjusting means for adjusting the output levels of said sound signals respectively on said channels (Figs. 1 and 3; column 3, lines 40-64; column 4, lines 13-21; column 9, lines 5-44);

information storing means for storing channel assignment information about a specific association between said channels and said speakers and output level information about a specific association between said channels and said output levels of said sound signals respectively on said channels (Fig. 1; column 3, line 26 to column 4, lines 21); and

control means for controlling said assigning means to have said assigning means assigning said channels to said speakers respectively based on said channel assignment information stored in said information storing means (Figs. 14-16; page 24,

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paragraphs 0353-0354), and controlling said output level adjusting means to have said output level adjusting means adjust the output levels of said sound signals respectively on said channels based on said output level information stored in said information storing means before said decoding means starts decoding said sound data into said sound signals respectively on said channels (Fig. 1; column 3, lines 40-64; column 4, lines 13-21; column 9, lines 5-44).

15. Regarding Claim 2, Kitamura discloses control means is operative to judge whether there is sound data on said respective channels or not to cause said speakers in association with said channels having no sound data thereon to be inoperative (column 8, lines 4-15).

16. Regarding Claim 7, Kitamura discloses selecting means for selecting said sound signals decoded by said decoding means, and summing means for summing said sound signals selected by said selecting means to output summed sound signals to respective said speakers (Figs. 2 and 3).

17. Regarding Claim 9, Sawabe discloses display means for displaying the output levels of said sound signals respectively on said channels (Figs. 1 and 2).

18. Claim 10 is essentially similar to Claim 1 and is rejected for the reasons stated above apropos to Claim 1.

19. Claim 11 is essentially similar to Claim 2 and is rejected for the reasons stated above apropos to Claim 2.

20. Claim 16 is essentially similar to Claim 7 and is rejected for the reasons stated above apropos to Claim 7.

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21. Claim 18 is essentially similar to Claim 9 and is rejected for the reasons stated above apropos to Claim 9.

Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

23. Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0123351 to Sawabe in view of U.S. Patent No. 37724790 to Hilbert.

24. Regarding Claim 5, Sawabe discloses output level adjusting means, but only generally; no specific hardware or software is taught. Therefore it would have been obvious to one having ordinary skill in the art to seek known output level adjusting means. Hilbert discloses stereo-effect enhancement system for increasing the apparent spatial separation in a multi-channel audio system includes variable gain amplifiers and comparator circuits which compare the amplitudes of the audio input signals and adjust the gain of the variable gain amplifiers in accordance with the ratio of the amplitudes of the audio input signals (abstract). It would have been obvious to one having ordinary skill in the art to employ any known output level adjusting means, such as that of Hilbert. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the gain adjusting means of Hilbert to adjust the gain

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of the variable gain amplifiers in accordance with the ratio of the amplitudes of the audio input signals.

25. Claim 14 is essentially similar to Claim 5 and is rejected for the reasons stated above apropos to Claim 5.

Response to Arguments

26. Applicant's arguments filed 12/13/2004 have been fully considered but they are not persuasive.

27. With respect to Applicant's argument on page 8, stating that "Sawabe et al, however, fails to teach or suggest control means for controlling said assigning means to have said assigning means assigning said channels to said speakers respectively based on said channel assignment information stored in said information storing means and controlling said output level adjusting means to have said output level adjusting means adjust the output levels of said sound signals respectively on said channels based on said output level information stored in said information storing means before said decoding means starts decoding said sound data into said sound signals respectively on said channels", has been noted. However, the Examiner respectfully disagrees. Sawabe discloses the audio decoder is set accordance with this attribute (page 21, paragraphs 0310 and 0315), which reads on "controlling said output level adjusting means to have said output level adjusting means adjust the output levels of said sound signals respectively on said channels based on said output level information

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stored in said information storing means before said decoding means starts decoding said sound data into said sound signals respectively on said channels”.

28. With respect to Applicant’s argument on pages 9 and 10, stating that “Sawabe et al, however, fails to teach or suggest control means for controlling said assigning means to have said assigning means assigning said channels to said speakers respectively based on said channel assignment information stored in said information storing means and controlling said output level adjusting means to have said output level adjusting means adjust the output levels of said sound signals respectively on said channels based on said output level information stored in said information storing means before said decoding means starts decoding said sound data into said sound signals respectively on said channels”, has been noted. However, the Examiner respectfully disagrees. See argument above.

29. With respect to Applicant’s argument on page 11, stating that “Ishii et al, however, fails to teach or suggest inputting means for having inputted thereto identification data identifying channel information about a specific association between said channels and said speakers and output level information about a specific association between said channels and said output levels of said sound signals respectively on said channels; and recording means for recording said identification data attached to said sound data in a manner that said identification data is read before said sound data is read”, has been noted. However the Examiner respectfully disagrees. Ishii discloses central control circuit 8 generates control signals C5 to C7 necessary for reproduction in accordance with the information stored in the audio

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stream attribute table (page 5, paragraph 0092), which reads on recording means for recording said identification data attached to said sound data in a manner that said identification data is read before said sound data is read. See Figs. 4, 6a-6c.

Conclusion

30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent Application Publication No. 2003/0144755 to Naruki et al discloses method for processing and reproducing audio signal at desired sound quality, reduced data volume or adjusted output level, apparatus for processing audio signal with sound quality control information or test tone signal or at reduced data volume, recording medium for recording audio signal with sound quality control information or test tone signal or at reduced data volume, and apparatus for reproducing audio signal at desired sound quality, reduced data volume or adjusted output level.

31. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey P. Chau whose telephone number is (571)272-7514. The examiner can normally be reached on Monday - Friday 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on (571)272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 11, 2005
CPC


HUYEN LE
PRIMARY EXAMINER